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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/280,518 04/05/99 FUJIWARA

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EXAMINER

MMC2/0226

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ART UNIT

PAPER NUMBER

2861
DATE MAILED:

02/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/280,518

Applicant(s)

FUJIWARA, KENSUKE

Examiner

David Yockey

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 13 December 2000 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Upon careful review of the disclosure in light of Applicant's arguments, it is respectfully submitted that the original disclosure fails to disclose the second potential detecting step as claimed. More particularly, the original specification discloses that the maximum intensity P_{MAX} is divided by 1023 and some laser intensities are selected at relatively course intervals, followed by exposure and potential measurement, and then followed by further finely dividing a region below a particular intensity for which a residual potential close to the desired potential is measured, after which the further dividing process is then repeated until a finish condition is reached (see Applicant's specification, page 10, line 18 through page 12, line 22, and particularly page 10, lines 22-25 and page 12, lines 5-15). However, repeated division of a predetermined laser intensity value into a plurality of second intervals is not found in the original disclosure.

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-2:

It is unclear what is meant by dividing a predetermined laser intensity value into a plurality of intervals; the claim is interpreted to mean that an interval of intensities with a predetermined maximum laser intensity is divided into a plurality of intervals.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Applicant's admission of prior art as illustrated in Figs. 5 and 6 and accompanying discussion in the specification (referred to hereinafter as 'APA') in view of Arevalo (US 6,104,986).

APA discloses an iterative algorithm for determining a particular value (laser intensity) for a particular constant value (potential), wherein a photoreceptor is exposed and measured to provide information so as to determine whether the measured value matches the constant value. However, APA does not suggest the claimed algorithm including the repeated and converging division of intensity into intervals.

Arevalo clearly discloses the claimed algorithm in general in Fig. 4. While Arevalo does not disclose application of the algorithm to laser intensity adjustment, the disclosure is reasonably pertinent to the claimed invention since it solves the same problem of determining the optimal value of a variable for a given constant variable in the same manner as Applicant. The purpose of implementation of the algorithm is to reduce the length of an optimization process, as suggested in the Background and Summary of the Arevalo disclosure. Further, the APA and Arevalo prior art disclosures considered together suggest that the Arevalo algorithm is faster in optimizing than the APA algorithm. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the algorithm disclosed by Arevalo in combination with exposure and measurement disclosed by APA for the purpose of reducing the length of optimization in adjustment of the laser intensity for a particular potential. Setting of a laser intensity greater than a suitable maximum intensity is suggested since the tested value is suggested to always ^{be within} with the range being tested (see column 5, lines 44-67).

Response to Arguments

Applicant's arguments filed 29 June 2000 have been fully considered but they are not persuasive.

Applicant's argument concerning the rejection under 35 USC § 112, second paragraph is not persuasive because division of a value results in another value, not a plurality of intervals.

Applicant argues that neither the admitted prior art (APA) nor Arevalo teach or suggest all the features of claims 2-5. This argument is not persuasive because the rejection is based upon a combination of the two citations, where the combination thereof suggests the claimed invention. In particular, APA clearly teaches the laser exposure and measurement, as well as indicating that optimization of exposure energy is desired and that application of an optimization algorithm to the determination of laser intensity is within the ability of one of ordinary skill in the art. Arevalo discloses an algorithm for optimizing measured values which reduces the length of an optimization process, where the Arevalo process steps with respect to measured values in general are the same as those claimed. In the combination, the exposure and measurement as claimed are suggested by implementation of the Arevalo algorithm to the determination of an optimum laser intensity in APA. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant argues that Arevalo is nonanalogous art. This argument is not persuasive. As indicated in the rejection, while Arevalo does not disclose application of the algorithm to laser intensity adjustment, the disclosure is reasonably pertinent to the claimed invention since it solves the same problem of determining the optimal value of a variable for a given constant variable in the same manner as Applicant.

Applicant argues that one would not be motivated to combine Arevalo with APA because Arevalo is directed to optimization of the performance of phase shifters. This

Art Unit: 2861

argument is not persuasive because a reference is to be considered not only for what it expressly states, but for what it would reasonably have suggested to one of ordinary skill in the art. *In re DeLisle*, 160 USPQ 806 (CCPA 1969). In the instant case, Arevalo reasonably suggests that implementation of the disclosed algorithm will result in reduced length of an optimization process as compared to a linear optimization, and thus provides motivation for combination with APA.

Applicant's argue with regard to instability of measured values is not persuasive. It is respectfully submitted that Applicant's invention will suffer from the same instability, and that the distribution of laser intensities over a restricted range will not prevent the instability because two optimum values may fall with the restricted range. Further, it is respectfully submitted that the intensities in the combination are, in fact, within a range that is less than the full range, since each of the two intensities suggested by the Arevalo algorithm are about in the middle of each half of the full range and, therefore, the two intensities are within approximately the middle half of the full range, with about one quarter of the range above and one quarter of the range below the middle.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Yockey whose telephone number is (703) 308-3084. The examiner can normally be reached on all weekdays.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (703) 308-0750. The fax phone numbers for the

Art Unit: 2861

organization where this application or proceeding is assigned are (703)305-3432 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

DY
February 24, 2001



DAVID F. YOCKEY
PRIMARY EXAMINER